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THE MORE IMPORTANT RECORDS FOR AUGUST 1936

The serious grasshopper situation in the Great Plains continued throughout August. During the month many reports were received of the hoppers defoliating shade and fruit trees, where other vegetation had been destroyed. Large populations of grasshoppers were also reported from the East Central States.

Distribution records indicate that Mormon crickets are widely prevalent in North Dakota and Montana.

In the southern Mississippi Valley the fall armyworm is moderately abundant in many places.

Japanese beetles show a notable increase in intensity this year in Connecticut and New York.

Say's stinkbug was found in Dickey County, N. Dak., east of its previously known distribution, and Scotts Bluff County, Nebr., and was present in damaging numbers in north-central Montana.

Hessian fly surveys indicate severe infestations in the East Central States, extending from the southwestern corner of Ohio, across the southern half of Indiana and the southern two-thirds of Illinois, with moderate infestations extending into east-central Missouri.

The corn ear worm was notably scarce throughout practically the entire country, with the exception of a rather heavy infestation in the Great Basin, Utah.

Peak flights of adults of the codling moth occurred during the first week in August in New York State, during the third week in August in Indiana, and during the second week in August in Washington State. Infestations in the East Central States are generally quite heavy.

Extensive injury to the terminal growth of potatoes by a plant bug, Lygus elisus Knight, was reported from North Dakota.

Very severe damage to late tobacco by the tobacco flea beetle was reported from North Carolina.

The cotton boll weevil was reported as rapidly increasing in numbers in North and South Carolina, Alabama, parts of Mississippi, and parts of Texas, while in other parts of Texas there was a decided reduction in populations.

In general, bollworm infestation is subnormal throughout the Cotton Belt, with a few localities reporting damage.

Leafworm damage has been checked in the lower Mississippi Valley by hot, dry weather, a few localities reporting damage.

The pink bollworm has been found in the lower Rio Grande Valley, at San Benito, Brownsville, and Rio Grande City. This is the most serious cotton insect of the month.

The alder flea beetle was unusually prevalent throughout the northern New England States and northern New York. A severe outbreak of this insect occurred also in the Targhee National Forest in Idaho. A blowfly, Paralucilia fulvipes Macq., formerly only known from the coastal part of California, was collected in several localities in Arizona. Although this species is primarily a carcass breeder, there is some evidence that it may cause myiasis in animals.

THE MORE IMPORTANT FEATURES IN CANADA IN JULY AND AUGUST 1936

Severe drought and high temperatures in the Prairie Provinces have aggravated the grasshopper situation. In Manitoba the grasshoppers are doing considerable damage to late crops in southwestern sections and in the Haskett district, but are comparatively scarce in the central part. Egg laying commenced early in August. In Saskatchewan the infestation of adults is generally heavier than that of last autumn. Egg laying was general in the northwest at the end of July and was beginning in southern districts. Concentration of the grasshoppers for egg laying resulted in some head damage to grain crops. Effective baiting was carried out throughout the entire west-central portion of the province, where the infestation was most severe. In Alberta grasshoppers are widespread and injurious. They have migrated to good crop areas and are causing some losses to wheat, but are particularly serious on coarse grains. A heavy increase and partial outbreak over most of the Dry Belt in the interior of British Columbia is reported and the outlook for 1937 is considered serious.

Blister beetles, of which Nuttall's blister beetle is a prevalent species, are abundant in areas of grasshopper outbreak, in the Prairie Provinces and the interior of British Columbia, causing damage to shrubs and garden plants.

The moth flight of the pale western cutworm had started in southern Alberta in mid-August and the abundance of the moths indicates a severe infestation in 1937.

Infestations of the wheat stem sawfly are severe generally in Saskatchewan and damage is increased by premature ripening and thin crops. In Alberta the wheat is being cut by the sawfly in all districts south of Stettler, and especially in areas of good crop.

The wheat stem maggot is not so abundant in Manitoba as in past years, but in northeastern and eastern districts of Saskatchewan it is causing some damage to wheat by producing white sterile heads.

The wheat midge has caused considerable loss in spring wheat in the Victoria district, Vancouver Island. It is also present in serious numbers at Lumby and Salmon Arm, in the interior of British Columbia.

Reports indicate that the Colorado potato beetle is unusually abundant in Ontario and the Prairie Provinces. In Saskatchewan infestations were found to occur almost as far north as the limits of settlement.

Following the occurrence of large and extensive flights of the beet webworm in the Prairie Provinces this spring, weeds, sugar beets and garden plants in many districts suffered injury from the larvae.

An increase in the European corn borer infestation in southern Ontario has occurred, but probably there will be little commercial loss to the corn crop.

The gladiolus thrips is now well established on southern Vancouver Island, in British Columbia.

The European earwig is more numerous than ever in coastal sections of British Columbia and is causing many complaints.

The pea moth is prevalent in pea-growing sections of the Gaspé Peninsula, Quebec.

Heavy infestations of the red turnip beetle, with consequent losses to garden plants, are reported in parts of Saskatchewan and Alberta.

The roundheaded apple tree borer is more numerous than in previous years in orchard sections of southern Quebec. The apple curculio and the plum curculio are very injurious to the apple crop in this region, as the crop is very light, following destructive spring frosts.

The rosy apple aphid was the outstanding insect pest early this summer in orchards of the Annapolis Valley, Nova Scotia. It was also more abundant and destructive than for many seasons in the Niagara district, Ontario. In the latter area, what threatened to be an unusually severe outbreak of the apple aphid was brought under control by extremely hot and dry weather.

The oriental fruit moth infestation in southern Ontario continues at a very low level and the insect is of much less importance than during any season since it became generally distributed over the peach-growing districts of the province. The peach borer is unusually injurious in the Niagara district.

There has been a pronounced reduction in the population of grape leafhoppers in the Niagara district, and it is believed that the outbreak, which

commenced in 1931, is definitely on the wane.

The European larch sawfly has increased in numbers throughout the southern half of New Brunswick and in some parts of Nova Scotia. Slight damage at scattered points has occurred in Prince Edward Island. In the Fernie area of British Columbia, a great reduction in this species is apparent this season.

Outbreaks of the yellow-headed spruce sawfly have been very severe in many parts of the three Prairie Provinces. The only areas that have escaped have been the most southerly portions.

Caterpillars of the cecropia moth have done considerable damage to boxelder in southern Saskatchewan.

The satin moth infestations in the Maritime Provinces have been more severe and widespread than in previous years.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Vermont. H. L. Bailey (August 19): Grasshoppers, Melanoplus sp., are very abundant in scattered spots about the State. Danville, in Caledonia County, Bridport in Addison, Newfane in Windham, and Tunbridge in Orange are localities of greatest abundance.

Ohio. T. H. Parks (August 25): Grasshoppers have increased in number during the summer and now approach normal numbers in many meadows and pastures. Notwithstanding the extreme drought, we have had calls for aid in controlling grasshoppers in only two counties, in each of which the outbreak was local.

Indiana. C. M. Packard and assistants (August 13): Grasshoppers are very abundant and doing serious damage in many cornfields in Tippecanoe County and other northern localities.

Illinois. W. P. Flint (August 20): Nearly all grasshoppers are now in the adult stage and mating is taking place generally. No eggs have been found. Many cornfields will suffer 25 to 50 percent loss of crop and a few fields will be completely destroyed.

Michigan. R. Hutson (August 24): Numerous small local infestations of grasshoppers, principally M. mexicanus Sauss., have been reported in southern Michigan. Injury to young orchards fairly prevalent.

North Dakota. F. Gray Butcher (August 18): Grasshoppers continued to cause concern during the past month, being reported as from moderately to very abundant in 35 counties. Injury to gardens and late flax fields in the drought area has been severe. A survey being conducted indicates that M. mexicanus is the predominant species.

Iowa. H. E. Jaques (August 23): Grasshoppers continue to be the most serious insect problem. Recent trips through many counties in western Iowa revealed great abundance. In some districts the weeds are all stripped to the main stem and even the thistles are being eaten.

Missouri. H. Baker (August 26): Grasshoppers have defoliated many young orchards throughout the section around Saint Joseph, where the trees have not been protected by bait and sprays. Older, bearing trees have suffered little damage, although some isolated trees, trees in outside rows, and low hanging limbs on other trees have been defoliated.

Nebraska. M. H. Swenk (August 24): There is quite a large grasshopper population. Damage to the leaves of trees was commonly reported during the last 10 days in July, and loss of corn was complained of until about August 10, when the destruction of the corn by the drought reduced the reports of crop damage.

Kansas. H. R. Bryson (August 19): Grasshoppers (Melanoplus spp.) continued to be the outstanding pests last month. Visits to western and north-western counties revealed the fact that few trees bordering wheat fields escaped defoliation. Cornfields were completely stripped of their leaves. In many instances the stalks were eaten close to the ground. Sorghums for the most part were not attacked. The defoliation of orchard trees and alfalfa fields is general. The absence of weeds and succulent vegetation in waste areas brought about by the drought has forced the hoppers to the green cultivated crops. The population is such that the second generation and adults of the first generation will cause considerable injury to fall-sown alfalfa and winter wheat.

Oklahoma. C. F. Stiles (August 19): For the past 3 weeks grasshoppers have been defoliating many of the shade trees along the streams and along the fence rows through the northeastern and western parts of the State. In Mayes County in the northeastern and Woods County in the northwestern part of the State, practically all the trees, including fruit trees, have been defoliated. No doubt many of the trees will die, because the hoppers are getting every tender shoot that appears. They have been extremely hard to poison during the hot weather, as they are not feeding much on the ground and are hunting cooler, shady places, such as the north sides of fence posts and trees. Approximately 2,000 tons of bait have been prepared and distributed throughout the State.

Montana. A. L. Strand (August): About 3,000 tons of bait have been used in Montana this season, mostly in the counties along the Yellowstone River, where infestations of grasshoppers in irrigated crops have been very heavy.

Utah. G. F. Knowlton (July 31): Grasshoppers are much more abundant in many parts of Cache County than they were a year ago. Most abundant in fields are M. packardii Scudd., M. mexicanus, M. femur-rubrum Deg., M. bivittatus Say, Aulocara elliotti Thos., and Dissosteira carolina L. (August 8): Grasshoppers have caused severe stripping of wheat and alfalfa north of Paragonah, and much damage west of Parowan in Iron County. Many M. bivittatus and M. packardii have died of disease.

LUBBER GRASSHOPPER (Romalea microptera Beauv.)

Alabama. J. M. Robinson (August 13): Lubber grasshoppers were reported as very abundant, attacking flowers on lawns at Uniontown on August 3.

MORMON CRICKET (Anabrus simplex Hald.)

North Dakota. F. Gray Butcher (August 18): The distribution of Mormon crickets over the State is increasing. Reports indicate that the crickets are present generally throughout Ward County, have also been found in numbers in Burleigh and Stark Counties, and a few individuals in Divide and Pierce Counties.

Montana. A. L. Strand (August): Mormon cricket infestations are about the same as in 1935, with some extension of the outbreak into southeastern

Montana. The area includes the territory bounded by Glacier, Pondera, Teton, Cascade, Meagher, Park, Carbon, Big Horn, Powder River, Custer, Rosebud, Musselshell, Golden Valley, Wheatland, Judith Basin, Chouteau, Liberty, and Toole Counties. Smaller infestations are present in Sanders and Lake Counties, west of the Divide.

PALE WESTERN CUTWORM (Porosagrotis orthogonia Morr.)

Montana. A. L. Strand (August): Damage by the pale western cutworm was more severe than in any year since 1932. The main area affected lies in north-central Montana in Cascade, Teton, Pondera, Toole, Liberty, Hill, and Chouteau Counties.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

North Carolina. C. H. Brannon (August 15): This insect is still causing damage in many sections of the State.

Georgia. T. L. Bissell (August 28): The fall armyworm is very abundant on grass at Experiment.

Tennessee. G. M. Bentley (July 22): The fall armyworm has been doing serious damage in the following places: Locks Creek, in Cannon County, on millet, sorghum, and corn; Tiptonville, in Lake County, on June 1, on alfalfa.

Alabama. J. M. Robinson (August 13): The fall armyworm was moderately abundant near Huntsville during the last week of July.

Mississippi. C. Lyle (August 24): The southern grassworm was reported injuring corn at Yazoo City on July 31 and at Greenwood on August 3. Inspector Jack Milton reported it as causing moderately severe damage near Brandon. At State College it was causing serious damage to young corn on August 22.

ARMYWORM (Cirphis unipuncta Haw.)

Kentucky. M. L. Didlake (August 24): Late summer brood outbreaks in counties of southern and central Kentucky--Russell, Metcalfe, Wayne, Cumberland, Hart, and Clinton. They have eaten crabgrass in fields of lespedeza and soybeans, but the legumes were not attacked. Principal damage was done to corn, the blades being eaten off nearly up to the ears. Many of the worms have eggs of tachinid fly parasite on them.

BEET WEBWORM (Loxostege sticticalis L.)

Montana. A. L. Strand (August): The second generation of larvae has not shown up, although the flight of moths was enormous. This is the first year since 1932 that an outbreak of this species has occurred.

A. L. Gibson (July 6): Range plants and weeds, including Russian-thistle, have been severely defoliated at Whitehall, in Jefferson County. This is the first record in this area.

Utah. G. F. Knowlton (August 19): Larvae are leaving Russian-thistle, upon which they are abundant, and moving to potatoes, alfalfa, and garden vegetables in the Panguitch and Junction areas. (August 24): Beet webworms are damaging sugar beets in the Price-Castle Dale area, and are moving from weeds to potatoes at Panguitch and Junction, causing considerable injury. Vegetables in gardens are also damaged when weed hosts are abandoned.

WIREWORMS (*Elateridae*)

Alabama. K. L. Cockerham (August): It is estimated that there has been a potential reduction in price of 20 cents for each 100-pound bag of potatoes produced in Baldwin and Escambia Counties this year, owing to damage to the tubers by the Gulf wireworm (*Heteroderes laurentii* Guer.). A total of approximately 992,500 100-pound bags were produced in these two counties this season.

Mississippi. J. P. Kislanko (July 30): One adult of *H. laurentii* was collected at Hattiesburg, Forrest County, in garbage. This is the first record for the county.

North Dakota. F. Gray Butcher (August 18): In some of the potato-growing areas, especially in the Red River Valley, *Ludius* spp. and *Limonius* spp. have been causing considerable injury to the developing tubers.

WHITE GRUBS (*Phyllophaga* spp.)

Indiana. P. Luginbill and H. R. Painter (July 30): White grubs seriously damaged a lawn near Culver. Infestation averaged 7 grubs per square foot. The grubs are maturing, therefore they belong to brood C, the adults of which will emerge next spring. The corn in our variety-test plots at Crown Point shows serious damage, many plants being practically destroyed. Infestation averages 5 grubs per hill, with a maximum of 11. These are second-year grubs belonging to brood A, the adults of which will emerge in the spring of 1938.

Michigan. R. Hutson (August 24): White grubs have been reported as working on blueberry at South Haven; also causing trouble on dahlias at East Lansing, and to corn at Plainwell.

Minnesota. A. G. Ruggles and assistants (August): White grubs very abundant in Mower, Fillmore, Dakota, and Winona Counties.

Nebraska. M. H. Swenk (August 24): Complaints of injury to lawns were received from Buffalo and Madison Counties on July 24 and August 17, respectively, and to a strawberry bed in Franklin County on July 30.

JAPANESE BEETLE (*Popillia japonica* Newm.)

Connecticut. W. E. Britton (August 21): A considerable increase in numbers over last year is noticed in Hartford, New Haven, and Bridgeport. Riverside Park, Hartford, is heavily infested and soil treatment will

be started next week. Specimens of adults have been received from Hamden, Hartford, New Canaan, New London, and three lots from New Haven.

- Massachusetts. L. H. Worthley (August 10): On the first survey of a greenhouse in Springfield one Japanese beetle was collected.
- New York. R. D. Glasgow (August 18): The Japanese beetle is reported by State Bureau of Plant Industry Inspectors as notably more in evidence on the wing this season in parts of Westchester County and the lower Hudson Valley than it was last year.
- Pennsylvania. L. H. Worthley (August 10): A number of new infestations were found in nurseries in southeastern Pennsylvania, and a single new infestation was discovered in an establishment in the north-central part of the State. There has been a decided decrease in the number of beetles present in Philadelphia this year.
- Maryland. L. H. Worthley (August 10): Three beetles were found in a nursery located outside the regulated area at Timonium, Baltimore County.

ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

- New York. R. D. Glasgow (August 18): The Asiatic garden beetle has been reported by State Bureau of Plant Industry Inspector to be unusually abundant in parts of Westchester County this season, where the adult beetle has caused annoyance by entering houses.

SAY'S STINK BUG (Chlorochroa sayi Stahl)

- North Dakota. F. Gray Butcher (August): Say's plant bug was collected in wheat fields in Dickey County during the latter part of July. This appears to be the known eastern limit of its distribution in the State. The first record of its presence in North Dakota was from southwestern counties, Billings and Bowman, in 1934.
- Nebraska. M. H. Swenk (August 24): Specimens were received from Scotts Bluff County on July 20.
- Montana. A. L. Strand (August): Say's plant bug is present in damaging numbers over a wide area in north-central Montana.

COMMON RED SPIDER (Tetranychus telarius L.)

- Ohio. T. H. Parks (August 25): The common red spider has been very serious on many ornamentals and some vegetables. We received specimens of bean plants from Marietta showing very serious injury from this pest.

- Michigan. R. Hutson (August 24): Red spiders are very numerous on all sorts of deciduous trees, including orchard and shade trees in Lansing, Jackson, Monroe, Adrian, and Albion.
- Kentucky. M. L. Didlake (August 24): Red spider abundant on dahlias at Pineville.
- North Carolina. C. H. Brannon (August 10): We are experiencing red spider damage quite extensively on cotton.
- Alabama. J. M. Robinson (August 13): Red spider was reported attacking butter beans at Moulton on July 30, having spread from violets and sunflower plants near the edge of the garden.
- Mississippi. C. Lyle (August 24): Damage to phlox from red spider was reported from Aberdeen on August 10. It was reported as moderately abundant on ornamentals at Meridian and Jackson.
- Missouri and Kansas. H. Baker (August 26): Red spider can now be found in all orchards in the section around St. Joseph, Mo., and Wathena and Troy, Kans. It has done and is still doing much damage.
- Utah. G. F. Knowlton (August 14): Red spiders are damaging corn at Cannonville.
- California. H. J. Ryan (August 27): Damage by the two-spotted mite became suddenly apparent in August over about 3,000 acres of English walnuts in the San Fernando Valley. This is the first time this mite has been reported in the San Fernando Valley as doing serious damage. Occasional instances of minor injury have occurred previously in other parts of Los Angeles County, where a general infestation with a light population was found this year.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- General. C. M. Packard (August): The results of a survey of hessian fly conditions at harvest time are being published under date of August 31, 1936 as supplement to No. 6 of the Insect Pest Survey Bulletin.
- Ohio. T. H. Parks (August 25): The following is the result of an analysis made of 122 puparia in Pickaway County on August 20: Live larvae 2.7 percent; parasitized, 44.4; dead from causes other than parasitization, 52.9; total dead, 97.3. With such high percentage of mortality, it is doubtful whether the fly will be a serious menace this fall in any part of Ohio.

Indiana. C. M. Packard (August 13): Infestations at harvest time were light in the east-central and northeastern parts of the State. In the remainder of the State many fields were heavily infested, with attendant prospects of infestation in the wheat to be sown next fall. These prospects are being materially reduced by continued drought and high mortality of the puparia.

Illinois. W. P. Flint (August): The hessian fly situation has changed markedly since the fall of 1935. At present there is a general moderate to heavy infestation in all parts of Illinois, with the exception of approximately the northeastern fourth of the State, where the infestation is low, running from 3 to 8 percent. In all other sections of the State the infestation will run from 15 to 50 percent and will average about 30 percent for the western and southern sections, with the highest infestation in the State showing on the east side of Crawford and Lawrence Counties. Owing to the extremely hot and dry weather, there has been a high mortality of the fly in its summer, or flaxseed, stage. It is probable that the infestation this fall will be moderate, even in areas where the infestation last spring was high.

WHEAT JOINTWORM (Harmolita tritici Fitch)

Illinois. W. P. Flint (August): The wheat jointworm is of no importance in Illinois, except in the southern fourth of the State. It is fairly abundant south of a line drawn through southern Madison, Clinton, Marion, Clay, Richland, and Lawrence Counties. North of this line it is of no consequence.

CORN

CHINCH BUG (Blissus leucopterus Say)

North Carolina. C. M. Brannon (August 16): Late corn in Pitt County is being seriously damaged.

Indiana. C. Benton (August 13): First-brood adults still numerous and mating. Second brood now in from first to fifth instar and abundant in many fields in Tippecanoe County. Little mortality. Conditions mostly favorable to development.

Illinois. W. P. Flint (August 20): Second-brood bugs have developed in moderate-to-large numbers over most of the central and northwest-central parts of the State. It is still too early to make any predictions for next year, but apparently there will be a rather heavy carry-over. The infestations are, as in 1935, very spotted.

Iowa. H. E. Jaques (August 23): Chinch bugs have done some rather serious damage in southern Iowa.

Kansas. H. R. Bryson (August 22): Chinch bugs may be found in corn and sorghum fields in about all stages. They are not present in alarming numbers.

CORN LEAF APHID (Aphis maidis Fitch)

Tennessee. G. M. Bentley (July 22): Corn leaf aphid reported by County Agent of Cannon County as causing considerable damage on sorghum at Woodbury.

CORN LANTERN FLY (Peregrinus maidis Ashm.)

Mississippi. C. Lyle (August 24): Three or four heavy infestations of the corn lantern fly have been observed on late corn in Jackson and Harrison Counties by Inspector H. Gladney. On August 22 a heavy infestation of this insect was noticed on young corn at State College.

CORN EAR WORM (Heliothis obsoleta F.)

Connecticut. N. Turner (August): In southern Connecticut about 2 percent of the early sweet corn was affected. The second generation has not appeared.

Maryland. G. Myers (August 25): Around Rockville the field corn is remarkably free from infestation by the corn ear worm. We have not seen a single worm in the sweet corn in our garden.

Ohio. T. H. Parks (August 25): Corn ear worms are very scarce on market garden corn. No complaints have been received and personal inspections revealed very few damaged ears. Infestations in greenhouses have been reported. These probably were due to the fact that the insect overwintered there.

Indiana. E. V. Walter (August 13): Extremely scarce in corn at Lafayette. Early worms have all matured and left the corn. No eggs have been seen since early July.

Illinois. W. P. Flint (August 20): Corn ear worm is very scarce in the State. Examinations of canning corn show only from 3 to 5 percent infestation.

Iowa. H. E. Jaques (August 23): Many counties report moderate to heavy damage from corn ear worms.

Tennessee. G. M. Bentley (August 19): The injury is less this year than it has been for several years generally throughout the State.

Alabama. J. M. Robinson (August 13): The corn ear worm is very abundant in central Alabama.

Utah. G. F. Knowlton (August 28): Damage to corn is somewhat lighter than it has been for 2 years. Injury to tomato fruit in northern Utah ranges from 3 to 6 percent. The highest injury is approximately 11 percent in one field at Corinne.

CORN ROOT WORM (Diabrotica longicornis Say)

Minnesota. A. G. Ruggles (August 22): The western corn root worm was reported as doing damage at Willmar, Kandiyohi County.

COWPEAS

PEA APHID (Illinoia pisi Kalt.)

Georgia. O. I. Snapp (July 23): Aphids were very abundant on and caused considerable damage to field peas at Fort Valley during the latter part of July.

MEALYBUGS (Pseudococcus sp.)

Georgia. J. R. Thomson, Jr. (July 23): Mealybugs are more abundant than usual on field peas and other plants at Fort Valley.

GRASS

SOD WEBWORMS (Crambus spp.)

Kentucky. M. L. Didlake (August 24): Second-brood adults are more numerous than at any time this season--August 5 to 20--at Lexington.

California. J. C. Elmore (August 18): The sod webworm has become very destructive to new lawns in the San Gabriel Valley. The population ranges from 5 to 10 per square foot. All new lawns in this area are affected.

CHINCH BUG (Blissus hirtus Montd.)

Rhode Island. A. E. Stene (August 26): For the first time in 25 years the chinch bug has been sent into the office with a complaint that it is destructive to grassland. Not commonly present in injurious numbers in Rhode Island.

CROTALARIA

BELLA MOTH (Utetheisa bella L.)

Alabama. J. M. Robinson (August 13): Larvae are appearing in large numbers on Crotalaria at Crossville.

SUGARCANE

TERMITES (Isoptera)

Louisiana. B. A. Osterberger (August 3): About 60 percent of the stalks in a low spot in a sugarcane field at Anchorage, West Baton Rouge Parish, were damaged by termites. The feeding was near the surface of the ground and in some instances the entire pith was destroyed.

FRUIT INSECTS

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

- New York. D. W. Hamilton (August): At Poughkeepsie comparatively heavy moth captures have continued in light and bait traps since July 26. Peak flight of first-brood adults occurred on the nights of August 2 and 3. Several of the poorly sprayed orchards are from 20 to 50 percent injured.
- Ohio. T. H. Parks (August): Heaviest second-brood bait-pan catch was made between July 15 and 22. Another peak occurred on August 1. New larval entrances were appearing in such numbers as to justify a special spray during the second week of August in a few northern orchards. While the codling moth has made a remarkable come-back during the dry season, the situation is not serious except where spraying for the second brood was omitted.
- Indiana. L. F. Steiner (August 25): Activity of second-brood adults at Bicknell apparently reached its peak on August 19 when the catch in 318 traps amounted to 4,025 moths, as compared to the spring-brood peak of 700 moths on May 17, and the first-brood peak of 1,776 on July 11. At Vincennes in 20 traps the spring-brood peak of 158 moths occurred on May 17, the first-brood peak of 320 on July 6, and the second-brood peak of 209 on August 19.
- Illinois. W. P. Flint (August 20): Third-brood codling moth is very general in southern Illinois. The infestation on the average is fully as heavy as in 1934. In many cases the crop will be infested almost 100 percent.
- Kentucky. M. L. Didlake (August 24): Codling moths are still numerous at Lexington, second generation of adults flying.
- Missouri. H. Baker (August 26): Damage from second- and third-brood worms has been held to a minimum, owing to the extreme heat and drought, therefore damage has been light except in poorly sprayed or unsprayed orchards. Bait-trap catches indicated that second-brood moths appeared about August 10.
- Tennessee. G. M. Bentley (August 19): There has been an unusually heavy infestation of the second brood on apples generally over the State. Commercial orchardists report that difficulty has been experienced in controlling the second brood with the regular spray.
- Montana. A. L. Strand (August): Codling moth is present in greatly reduced numbers in Bitter Root Valley and Flathead Lake districts.
- Washington. E. J. Newcomer (August 20): Emergence of first-brood moths at Yakima has progressed in much the same manner as in 1935. A high point was reached on August 17, but the maximum may come later.

APPLE LEAF SKELETONIZER (Psorosina hammondi Riley)

Indiana. A. J. Ackerman (August 25): The apple leaf skeletonizer is very abundant in a moderately sprayed orchard at Elberfeld. Injury is quite conspicuous also in several poorly sprayed orchards near Vincennes.

FLATHEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Alabama. J. M. Robinson (August 13): The flatheaded apple tree borer was reported by the county agent at Linden as being very active on 3- or 4-year-old water oaks that had been transplanted.

Michigan. R. Hutson (August 24): Flatheaded apple tree borers are numerous at Goodells and Pinckney.

Nebraska. M. H. Swenk (August 24): Complaints of damage to shade and fruit trees continued to be received during the month.

APPLE APHID (Aphis pomi Deg.)

Ohio. T. H. Parks (August 25): The green aphid has been serious in some orchards of northeastern Ohio, where curling of the terminals has occurred. The outbreak terminated about the middle of August.

BUFFALO TREEHOPPER (Ceresa bubalus F.)

Iowa. H. E. Jaques (August 23): In Polk County we found apple orchards rather severely injured by the egg-laying scars of the buffalo treehopper.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Connecticut. P. Garman (August 21): European red mite is more abundant than it has been during the last 5 or 10 years. Its enemies are less abundant than usual.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (August 21): The second generation is unusually abundant in New Haven County and the third generation threatens serious damage.

Illinois. W. P. Flint (August 20): Oriental fruit moth caused far less damage than in 1935. The most heavily infested orchards show only about 6 or 7 percent infestation, as compared with 60 percent in 1935.

Georgia. O. I. Snapp (August 20): the infestation continues light in yard trees at Fort Valley, although the insect has damaged some late varieties of peaches. It is of no economic importance in the commercial orchards here. Of 34, 612 Elberta peaches cut open and examined this year, not one was found to be infested. These peaches were harvested from an orchard in which no control measures against the moth were taken.

Tennessee. G. M. Bentley (August 19): Oriental fruit moths have been found in heavy infestations on peach twigs throughout the State.

PEACH BORER (Conopia exitiosa Say)

Georgia. O. I. Snapp (August 20): There is a moderate infestation of the peach borer at Fort Valley. The moth emergence season is somewhat earlier than usual and has been fairly heavy for the last 2 weeks.

Michigan. R. Hutson (August 24): The peach tree borer has been reported from Saranac, Ionia, Albion, and Lansing.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Utah. G. F. Knowlton (August 19): Peach twig borers are causing much damage to peach fruits and twigs at Hurricane and La Verkin.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia. O. I. Snapp (August 20): Extensive jarring during the month shows that there are practically no adults on peach trees in commercial orchards around Fort Valley. A diligent search in peach orchards, nearby woodlands, and other favored places of hibernation failed to locate any adults during the past month.

RED-LEGGED FLEA BEETLE (Derocrepis erythropus Melsh.)

New York. W. E. Blauvelt (May 22): At Poughkeepsie in a peach orchard near a locust grove this insect was found feeding on the peach foliage, eating through the leaves.

PLUM

LEAF CRUMPLER (Mineola indigenella Zell.)

Texas. F. L. Thomas (July 30): Rather abundant on plum at Port Arthur and along the upper coastal district of Texas.

RASPBERRY

RASPBERRY FRUITWORM (Byturus unicolor Say)

Montana. A. L. Strand (August): Raspberry byturus has been the cause of heavy losses to raspberry growers in the Bitter Root Valley.

BLACKBERRY

RASPBERRY ROOT BORER (Bembicia marginata Harr.)

Washington... J. Wilcox and W. W. Baker (August 3): An infestation on bush blackberries reported at Alderton, where 25 hills in a row had been dug and examined and all were infested with larvae or pupae. Apparently few, if any, of the adults have emerged.

BLUEBERRY

CRANBERRY FRUITWORM (Mineola vaccinii Riley)

Michigan. R. Hutson (August 24): Cranberry fruitworm has been moderately abundant on cultivated blueberries at South Haven.

GRAPE

GRAPE SAWFLY (Erythraspides pygmaea Say)

Connecticut. W. E. Britton (August 21): Several nearly full-grown larvae were received from Norwich.

WESTERN GRAPE SKELETONIZER (Harrisina brillians B. & McD.)

Utah. G. F. Knowlton (August 20): Western grape leaf skeletonizer was reported as defoliating grapes and virginia creepers at Blanding.

PECAN

PECAN WEEVIL (Curculio caryae Horn)

Georgia. M. du Pree (August 15): Pecan weevil very abundant on pecan at Milner, in Lamar County, Strouds, in Monroe County, and Experiment, in Spalding County.

HICKORY NUT CURCULIO (Conotrachelus affinis Boh.)

Mississippi. C. Lyle (August 24): Specimens from pecan were received from Greenwood on August 11.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Alabama. J. M. Robinson (August 13): The adult whitefly was emerging the last week of July and the first week of August in Auburn, having developed on the foliage of the various species of privet. They are not so abundant as they were during the past 2 years.

Mississippi. C. Lyle and assistants (August 24): A heavy infestation on ornamentals in Harrison County and a moderate infestation on cape jasmine at Ridgeland, Jackson, and Meridian.

Texas. S. W. Clark (July 30): D. citri and D. citrifolii Morg. present on citrus at Mercedes. Injury by the latter-named species was rather severe in June.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Mississippi. C. Lyle (August 24): L. beckii was apparently spreading in a

satsuma orchard in the southern part of the State during the past month.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Mississippi. H. Gladney (August 24): Four or five infestations have developed in Jackson and Harrison Counties.

T R U C K - C R O P I N S E C T S

BLISTER BEETLES (Meloidae)

Nebraska. M. H. Swenk (August 24): Epicauta lemniscata F. continued to damage tomato and other plants in Otoe, Lancaster, and Clay Counties during the latter part of July, and Macrobasis albida Say and E. maculata Say were reported from Box Butte County on August 7.

Oklahoma. E. Hixson (August 19): Blister beetles (Epicauta spp.) are beginning to cause concern. They are feeding on tomato and various weeds, Swiss chard, and other plants.

Montana. A. L. Strand (August): Blister beetles, mostly E. maculata, have been unusually abundant over most of the State, particularly along the Yellowstone River. Severe damage to potatoes, sugar beets, and caragana.

FALSE CHINCH BUG (Nysius ericae Schill.)

North Dakota. F. Gray Butcher (August 18): Requests for information concerning the false chinch bug continue to come to the office, but these insects are not so abundant as they were a few weeks ago.

Montana. A. L. Strand (August): The false chinch bug is more numerous than ever before observed in the State. Most of damage to potatoes.

Utah. G. F. Knowlton (August 28): The false chinch bug is abundant and causing injury to vegetables in northern Utah.

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla Perty)

Nebraska. M. H. Swenk (August 24): From Hayes and Sheridan Counties came specimens for identification.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Michigan. R. Hutson (August 24): Adults, eggs, and larvae are numerous in the vicinities of Chatham and Gaylord.

Tennessee. G. M. Bentley (July 18): Colorado potato beetle is present in

large numbers in western Tennessee, and also in eight counties on the Cumberland Plateau in eastern Tennessee.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

North Dakota. J. A. Munro (August 18): The potato flea beetle is generally distributed and moderately abundant over the potato-growing district of the eastern border counties.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Connecticut. N. Turner (August 21): Reports of serious damage to dahlias from the potato leafhopper in several sections of the State.

Michigan. R. Hutson (August 24): Potato leafhopper is numerous at East Lansing on dahlias, potatoes, and alfalfa.

North Dakota. J. A. Munro (August 18): Moderately abundant in the potato-growing districts in the Red River Valley.

Texas. S. W. Clark (August 1): E. fabae is infesting all varieties of cow-peas. This insect is one of the most important limiting factors in the production of fall beans in southern Texas.

A PLANT BUG (Lygus elisus Van D.)

North Dakota. F. Gray Butcher (August 18): This mirid has been causing some injury to the terminal growth of potatoes. In some fields the injury has been quite extensive. (Det. by H. H. Knight.)

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. A. E. Michelbacher (August 20): In a tomato field at Visalia on July 16 I examined 400 tomatoes and found only 1 of them infested with the tomato pinworm. On August 8 I visited this same field and found that 12 percent of the fruits were infested with this pest.

J. C. Elmore (August): The tomato pinworm has not caused heavy losses in southern California this year. Only traces of infestation in most of the summer tomato-growing areas, with an occasional case of 1 to 2 percent fruit damage. In the highland areas the pinworm continues to be a major pest with 25 to 50 percent fruit damage.

TOMATO WORMS (Protoparce spp.)

Michigan. R. Hutson (August 24): Trouble from tomato worms has been common about Monroe, Lansing, Jackson, Alpena, and Saginaw.

Iowa. H. E. Jaques (August 23): The tomato sphinx, though not so abundant as in many years, has caused serious trouble at this time when growth has been unusually difficult.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

- Maryland. T. L. Bissell (August 24): Mexican bean beetle is very injurious to lima beans in the vicinity of Westover.
- Ohio. T. H. Parks (August 25): The Mexican bean beetle has not been very serious since late in July and has apparently been reduced by the extreme heat and drought.
- Tennessee. G. M. Bentley (August 19): Generally over Tennessee this year there has been a very light infestation of the Mexican bean beetle.
- Alabama. J. M. Robinson (August 13): Larvae are active, after several rains in the last week of July and the first week of August.
- Missouri. J. C. Dawson (July 6): A specimen of the Mexican bean beetle was taken from a Japanese beetle trap in St. Louis on June 24. This is believed to be the first specimen ever taken in the State. (Identified by E. A. Chapin.)

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

- Mississippi. C. Lyle (August 24): The bean leaf beetle was causing considerable damage to soybeans at Greenwood on August 15. At State College the insect was ruining garden beans and cowpeas on August 22. The damage seems rather general.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

- Georgia. O. I. Snapp (August 17): The lesser cornstalk borer is unusually abundant at Fort Valley and has ruined some large fields of snap and lima beans.

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

- Ohio. R. H. Davidson (August 17): Adults are very abundant at Columbus. Many of the larval stages are parasitized.
- Michigan. R. Hutson (August 24): Cabbage worms are causing damage at Harrison and Holland.
- Iowa. H. E. Jaques (August 23): Cabbage worms have been serious in many gardens and in the market-garden districts.
- Utah. G. F. Knowlton (August 1): Cabbage worms are damaging cabbage at Bert and Tremonton, in Box Elder County. (August 19): Cabbage worms are damaging cabbage at Hurricane, and adult moths were extremely abundant along the highway near Gunnison. Injuring cabbage in the Spanish Fork district.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Ohio. R. H. Davidson (August 17): A few larvae were observed on cabbage grown on the State Farm at Columbus. The injury is of minor importance.

CABBAGE LOOPER (Autoarapha brassicae Riley)

Ohio. R. H. Davidson (August 17): Larvae are very abundant on cabbage grown on the State Farm at Columbus. The infestation is heavy and injury is severe. On account of the humid weather prevailing at present, many of the larval stages are dying from a bacterial disease.

Mississippi. C. Lyle (August 24): The cabbage looper was reported by L. J. Goodgame as causing serious damage to mustard in Monroe County on August 21. On the same date it was unusually destructive to fall turnips at State College.

FLEA BEETLES (Halticinae)

South Carolina. C. O. Bare (August 24): At least three species of flea beetles are involved in a severe attack on the seedlings of a 10-acre planting of cabbage in the Charleston area. A number of growers report similar trouble. The striped flea beetle (Phyllotreta vittata F.) and an undetermined species both present in approximately equal numbers are responsible for the greater part of the damage.

CABBAGE APHID (Brevicoryne brassicae L.)

Ohio. R. H. Davidson (August 7): Injury by the cabbage aphid is noticeable on cabbage at Columbus. Parasites and predators are keeping the insect in check.

Nebraska. M. H. Swenk (August 11): From Dawson County comes the complaint of the cabbage aphid infesting cabbage plants.

Utah. G. F. Knowlton (August 24): Cabbage aphids are injuring cabbage in the Spanish Fork area.

MELONS

CUCUMBER BEETLES (Diabrotica spp.)

California. J. C. Elmore (August 6): Cucumber beetles, D. soror Lec., D. balteata Lec., and D. trivittata Mann., were very numerous on watermelon vines at Chula Vista, San Diego County. The beetles had eaten from one-half to all of the green surface from many of the melons, causing them to have the color of muskmelons.

R. E. Campbell (August 7): The following is quoted from the Los Angeles County Farm Bureau Monthly, August, 1936, page 7: "A few serious cases of bacterial wilt have appeared in several squash

and melon patches of the El Monte-Puente District. All of these cases have followed bad infestations of cucumber beetles."

MELON APHID (Aphis gossypii Glov.)

Georgia. O. I. Snapp (July 28): Late watermelons at Fort Valley and Marshallville had heavy infestations of aphids late in July. A number of growers applied for information on control measures.

Kentucky. M. L. Didlako (August 24): Melon aphids destructive on cucumber vines, but outbreak controlled by ladybeetles (Hippodamia convergens Guer.) at Lexington.

Nebraska. M. H. Swenk (August 24): Inquiries as to control of the melon aphid on cucumbers were received from Gosper and Lancaster Counties.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Ohio. R. H. Davidson (August 17): Adults were noticed as very numerous on squash on a farm at Columbus. Eggs and last-instar nymphs are also abundant and the injury is rather severe.

Nebraska. M. H. Swenk (August 19): From Custer County comes a complaint of squash bugs killing squash and pumpkin vines.

Kansas. H. R. Bryson (August 22): Squash bugs are very abundant, or at least the population is concentrated on the squash and pumpkin vines that escaped the effects of the drought.

Utah. G. F. Knowlton (August 28): Numerous observations and reports of injury by the squash bug have been made this season.

SQUASH BORER (Melittia satyriniformis Hbn.)

Michigan. R. Hutson (August 24): Squash vine borers are causing trouble at Kalamazoo and Allegan.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Connecticut. H. Turner (August 21): Severe thrips infestation on seed onions at Mt. Carmel farm.

STRAWBERRY

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Oregon. W. W. Baker (July 9): The largest strawberry grower in the vicinity of Parkdale is going out of the business due to the trouble encountered in controlling Tarsonemus pallidus.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (August 5): The pepper weevil is numerous in Orange County and in the northern end of San Diego County where control has not been practiced. Estimated damage or loss (by actual count of infested pods) ranges from 30 to 75 percent.

PEPPER MAGGOT (Zonosemata electa Say)

New Jersey. M. Kisliuk, Jr. (August 11): In the vicinity of Vineland on August 9 the backyard plantings of peppers were found to be from 10 to 15 percent infested with the pepper maggot. Commercial plantings in the vicinity showed from 2 to 10 percent infestation.

CARROT

CARROT BEETLE (Ligyrus gibbosus Deg.)

Nebraska. M. H. Swenk (August 24): A Pierce County correspondent reported the carrot beetle attacking the roots of marigold plants and also damaging carrot plants on August 6.

Washington. E. W. Jones (August 18): The carrot beetle was reported damaging sunflowers at Wallula on August 14.

SWEETPOTATO

GOLDEN TORTOISE BEETLE (Metriona bicolor F.)

Tennessee. G. M. Bentley (August 7): Sweetpotato or tortoise beetle occurring in large numbers on the leaves of sweetpotatoes at McLemoresville, Carroll County.

SUGAR BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Montana. A. L. Strand (August): Curly top of sugar beets has been practically absent this year in Yellowstone River counties. Last season damage in some fields there approached 20 percent.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula F.)

North Carolina. C. M. Brannon (August 25): Damage to late tobacco is universal and this is probably the most serious infestation for more than a decade.

SUCKFLY (Dicyphus minimus Uhl.)

North Carolina. C. H. Brannon (August 26): There are serious infestations of tobacco suckfly on tobacco in Martin County.

A TOBACCO WORM (Protoparce sp.)

North Carolina. C. H. Brannon (August 25): Infestations of tobacco hornworm on late tobacco are the worst in more than 10 years.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

North Carolina. C. H. Brannon (August 10): Boll weevils are beginning to develop in several sections of this State. (August 25): Infestations are quite severe in many sections, other sections showing very little damage.

South Carolina. F. F. Bondy and C. F. Rainwater (August 22): Boll weevils are steadily increasing in numbers and are migrating from the old to the young cotton. (August 29): In the young cotton some fields increased from 6 to 50 percent in 1 week and much young cotton has stopped blooming because of weevil damage.

Georgia. P. M. Gilmer and P. A. Glick. (August 15): Boll weevils are moderately numerous in upland cotton and are increasing in Sea Island, the infestation being approximately 17 percent, as compared to about half that during the previous week. (August 22): Cotton showing second growth is now beginning to produce small numbers of squares, almost 100 percent of which are injured. On Sea Island cotton the increase is causing some injury. On August 17 approximately 12.5 percent of the squares examined at Nashville showed egg punctures.

Tennessee. G. M. Bentley (August 19): In the cotton-growing districts of Tennessee very little cotton boll weevil has been found.

Alabama. J. M. Robinson (August 13): Boll weevil infestation is increasing in central and southern Alabama, being 18 percent at Auburn.

Mississippi. C. Lyle (August 24): Infestation in Mississippi has continued to be extremely light and cotton plants are blooming all the way to the top, indicating no damage.

H. C. Young (August 15): Square infestation records made in 11 fields near State College, ranged from 2.17 to 59.67 percent, averaging 20.46 percent, as compared with 13.67 percent the previous week.

E. W. Dunnam and J. C. Clark (August 15-22): Boll weevils are becoming very scarce at Stoneville.

Louisiana. R. C. Gaines and assistants (August 15-29): The numbers of boll weevils taken on nine flight screens at Tallulah were as follows:

Date	1936	1935	1934
August 14---	87	37	148
August 21---	69	9	33
August 29---	63	23	82

Mr. Young and assistants examined 7,200 squares in plots that had received no treatment and found an average square infestation of 37.3 percent. This infestation ranged from 16.7 to 66.2 percent for the week ending August 15.

Arkansas. D. Isely (August 22): The boll weevil is of no economic importance in any part of Arkansas, probably because of the prevailing severe drought and high temperatures.

Oklahoma. C. F. Stiles (August 19): If the hot, dry weather continues for another 10 days boll weevil damage through the State will perhaps be the lightest on record since all of Oklahoma has been infested with the weevil. The heaviest infestation last week in southeastern Oklahoma was 0.5 percent.

Texas. F. L. Thomas (August 7): The average numbers of squares punctured by boll weevils in the several sections of the State are as follows: Southern, 60 percent; southeastern, 26 percent; south-central, 10; north-central, 5 percent; northern, 4. These figures are based on examination of 33 farms, some of which had been poisoned for leafworms and weevils. (August 28): The infestation is comparatively light in many fields but is increasing, following the setback received during the hot weather of about 2 weeks ago.

R. W. Moreland (August 1): Migration has been going on near College Station for some time in the upland cotton, as the infestation has built up rapidly during the past 2 weeks. Examined 5,400 cotton squares in upland fields during the week and 1,500 of these were in checks, where 804 punctures were found. The infestation ranged from 42.7 to 64.0 percent with an average of 53.6 percent; 2,700 squares were examined in plots that had received more than a presquare application and 870 punctures were found. The infestation in these plots ranged from 6.3 to 57.7 percent, with an average of 32.2 percent.

K. P. Ewing and R. L. McGarr (August 15): At Port Lavaca general weevil infestation is reduced from last week. Infestation records made in the check plots in the weevil experiments in Jackson County this week average 22.4 percent punctured squares, as compared with 43.9 percent last week. The reduction is no doubt due to poisoning for leaf worms (Alabama argillacea Hbn.), along with the hot, dry weather.

Mexico. C. S. Rude (August 13): Infestation at Tlahualilo, Durango, has increased rapidly in the past week. In some regions the infestation is from 70 to 80 percent in squares and from 15 to 50 percent in bolls.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. F. L. Thomas (August 21): By far the most important event of the week was the finding of the pink bollworm in the lower Rio Grande Valley by men from the Bureau of Entomology. The announcement Tuesday of the finding of 15 worms at San Benito and 4 at Brownsville is of sufficient importance to cause the gravest concern to all of Texas and to southern Texas in particular. The finding of 276 specimens at Matamoros and a few others at Reynosa, Mexico, 50 miles up the river, indicates that it is pretty well established on the Mexican side opposite Cameron and Hidalgo Counties. (August 28): Four counties, Cameron, Hidalgo, Starr, and Willacy, have been quarantined because of the discovery of pink bollworm in Cameron County.

A. J. Chapman (August 15): Infestation counts were made in 13 fields at Presidio during the week. These fields averaged 6.82 percent of the bolls infested, the infestation ranging from 0 to 46 percent. (August 22): Boll infestation records were made in 11 fields. The average infestation in these fields was 31.55 percent, ranging from 1 to 95 percent. Infestation in 8 of the 11 fields last year was 12.25 as compared with 34.88 percent this year. (August 29): Boll-infestation records were made in 10 fields. The average infestation in these fields was 29.60 percent, ranging from 7 to 61 percent. Infestation in 9 of the 10 fields last year was 17.67, as compared to 26.33 percent this year.

Mexico. C. S. Rude (August 18): The pink bollworm infestation is steadily increasing at Tlahualilo, Durango. Some evidences of migration are noticeable. An infestation of 70 percent was observed in a field where the previous infestation was only about 10 percent. The heavy infestation was nearly all first-instar larvae. (August 25): In most parts of the Laguna the infestation is around 80 percent. Migrations from the sections of early infestation have started and probably the entire Laguna will soon have a rather general infestation.

BOLLWORM (Heliothis obsoleta F.)

South Carolina. F. F. Bondy and C. F. Rainwater (August 22): Bollworms are doing some damage in the young cotton at Florence.

Alabama. J. M. Robinson (August 13): The cotton bollworm was damaging cotton in the Greenville district about July 28. Apparently it was moderately abundant.

Mississippi. C. Lyle (August 24): A complaint of injury by the cotton bollworm was received from Columbia on August 18.

E. W. Dunnam (August 22): In many fields at Stoneville a few bollworms are noted.

Louisiana. R. C. Gaines and assistants (August 22): Only a few scattered specimens have been observed at Tallulah. (August 29): Specimens can be found in most fields at Tallulah.

Texas. F. L. Thomas (August 7): Cotton bollworms are causing severe injury where the fields were overflowed and on river bottom lands that received heavy rains about July 1. Injury seems to be greatest in the Brazos and Colorado River bottoms and on creek bottom lands of central and southeastern Texas. (August 21): Early this week the second generation of cotton bollworm to attack cotton began to cause injury to squares. Notwithstanding the hot weather of last week and wilting of cotton in many fields, a good percentage of the young worms were reaching the squares.

K. P. Ewing and R. L. McGarr (August 15): A few scattered bollworms observed doing damage in a good many fields around Port Lavaca. (August 22): During the week there has been a very conspicuous increase in infestation and damage in the Port Lavaca district, particularly in the river bottoms and in fields where the cotton continues to make good growth. Bollworms became a very serious factor in the field-plot experiments at Edna during the week. Infestation records in the 11 cuts under observation showed an average of 11.2 percent of the squares infested. The highest average for a cut was 16.2 percent, while in some plots the infestation was as high as 25 percent. Most of the worms were small and perhaps 95 percent of the damage was confined to the squares.

R. W. Moreland (August 1): Examined 4,000 cotton terminals on six different plantations near College Station during the week and found 140 bollworm eggs and 176 bollworms ranging in size from first instar to full grown. The eggs averaged 3.5 per 100 terminals and the worms 4.4. (August 15): Examined 5,400 cotton terminals during week and found 879 eggs. Eggs ranged from 6 to 40 per 100 terminals, with an average of 16.3 as compared with an average of 2.4 eggs per 100 terminals for the past week. During the week ending August 17, 1935, 2,400 terminals were examined and 1,806 bollworm eggs were found. Eggs ranged from 60 to 84, with an average of 75 per 100 terminals. (August 22): In examining 1,500 cotton terminals, 10 per point, at 150 points in experimental plots, 264 eggs were found, or an average of 17.6 eggs per 100 terminals. This is slightly higher than for the week ending August 15.

COTTON LEAFWORM (Alabama argillacea Hbn.)

Michigan. R. Hutson (August 24): The first adult of A. argillacea showed up in a light trap on August 22.

South Carolina. F. F. Bondy and C. F. Rainwater (August 22): One cotton leafworm larva and a number of adults were found at Florence during the week. The first moths were caught in a light trap on the night of August 2. (August 29): Larvae and adults are found in the fields. No stripping to date.

Georgia. P. M. Gilmer and P. A. Glick (August 14): In sweepings from Sea Island cotton at Nashville we took our first and only specimen of cotton leafworm. This specimen was about half grown. (August 22): Leafworm appearing in small numbers. One adult has been reared from a larva taken on August 12. No damage apparent as yet.

- Tennessee. G. M. Bentley (July 15): Cotton leafworm was found in small numbers of second-instar stages in Tipton County. Large numbers of the insect in third and fourth instars were found at Eads, in Shelby County, on July 31. At Milan, in Gibson County, cotton leafworm was just beginning to show up on August 11. Several cotton fields at Covington, in Tipton County, infested on August 1.
- Alabama. J. M. Robinson (August 13): Light infestation of cotton leafworm was reported from Eastaboga, in Talladega County on July 29, with heavy infestations in the lower places. On the same date this insect was reported as being on 30 acres of cotton at Eutaw. The cotton leafworm has now been reported along the entire west side of the State and is generally distributed in the southern, central, and northern parts. Twenty-nine of the 67 counties have reported cotton infested with it. In southern and central Alabama the cotton is fairly well matured. In Greene County dusting is being done.
- Mississippi. C. Lyle (August 24): The cotton leafworm was first noticed in Mississippi about July 27. Reports indicated that the infestation was rather general over most of the State, specimens and complaints having been received from a large number of widely distributed localities. The infestation was rather light in most places, but some defoliation was reported. Extremely hot, dry weather during August has checked the worms considerably.
- H. C. Young (August 15): A few moths are emerging at State College and the main crop of moths will be out by the middle of next week. About 90 percent of the crop will be mature before the second generation of worms can defoliate the plants. (August 29): All green and succulent cotton plants are now heavily infested.
- E. W. Dunnam (August 22): Very few worms can be found in the fields at Stoneville.
- Louisiana. R. C. Gaines and assistants (August 22): Hot, dry weather has continued to hold the leafworm in check. However, it is developing to a certain extent in isolated fields in the rankest and greenest cotton around Tallulah: Moths are abundant. (August 29): Some stripping has been observed during the past week. Considerable poisoning has been done in scattered areas. This condition seems to be true throughout the parishes of East Carroll, Madison, and Tensas.
- Arkansas. D. Isely (August 22): Cotton worms are generally distributed over the southern and eastern parts of the Cotton Belt in Arkansas.
- Oklahoma. C. F. Stiles (August 19): Cotton leafworm has been found in three places in Oklahoma--two in McCurtain County along the Red River and one in Muskogee County along the Arkansas River.
- Texas. F. L. Thomas (August 7): Leafworms are stripping untreated fields of cotton in southern Texas and severely ragging the more succulent cotton in central and eastern Texas, where control measures have not been applied.

R. W. Moreland (August 1): The cotton leafworm is beginning to rag cotton in some fields at College Station where no dusting has been done.

A. J. Chapman and assistants (August 22): The cotton leafworm infestation at Presidio continued to be spotted and in some places they are doing damage. (August 29): During the week the cotton leafworm infestation has spread generally over the Presidio Valley below the Conchos River. Only a few fields have been defoliated.

Arizona. T. P. Cassidy (August 15): Several specimens of the cotton leafworm were found by W. A. Stevenson in the experimental cotton at Fresnal Papago Indian Reservation on August 12. This is the first report received at this office of leafworms in Arizona this season. The worms ranged in size from very minute to half-grown larvae, indicating that an influx of moths to this area has been taking place for several days.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

South Carolina. F. F. Bondy and C. F. Rainwater (August 29): There are lots of hoppers in all the young cotton in the vicinity of Florence and in some fields they are doing much damage.

Georgia. P. M. Gilmer (August 22): The flea hopper is present at Tifton but doing no damage.

Mississippi. E. W. Dunnam (August 22): A few flea hoppers noted in cotton fields at Stoneville but not causing damage.

Louisiana. R. C. Gaines (August 22): P. seriatus may be found in limited numbers on croton at Tallulah. However, it is difficult to find a single specimen on cotton.

Texas. K. P. Ewing and R. L. McGarr (August 15): Flea hopper infestation observed in one field of young cotton in Calhoun County during the week. (August 22): No particular damage at this time, except in isolated fields of very young cotton.

R. W. Moreland (August 1): In some fields near College Station the population is fairly heavy. (August 15): Some injury being done by hoppers as blasted squares are noticeable in places.

THRIPS (Thysanoptera)

Mexico. C. S. Rude (August 11): Thrips are doing a considerable amount of damage to cotton in some fields at Tlahualilo, Durango. (August 18 and 25): Thrips continue to increase and the damage caused by them is quite severe.

A SCARABAEID (Dichromina dinidiata Burn.)

Arizona. T. P. Cassidy and T. C. Barber (August 1): This beetle was found

feeding in cotton blooms at Sawyer Ranch the past week. Injury to cotton blooms from this insect was first noted during July 1935 in the experimental cotton field located at this ranch, which is 25 miles southwest of Tucson. The 1935 infestation lasted for only about 10 days, the beetles disappearing from the field as suddenly as they came. (August 15): These beetles were found injuring cotton bolls in the experimental cotton at Fresno on August 10.

FOREST AND SHADE - TREE INSECTS

SATIN MOTH (Stilpnotia salicis L.)

Connecticut. J. C. Schread (July 1): The satin moth has increased to alarming proportions in Bridgeport, where it is widespread throughout the city. Some trees are partially defoliated.

GYPSY MOTH (Porthetria dispar L.)

Maine. H. B. Peirson (August): Gypsy moths on oak were very numerous in early August in central Maine, the moths laying their eggs being noticeable.

Connecticut. W. E. Britton (August 21): No defoliated trees noticeable in Connecticut. No unusually large infestations discovered.

BROWN-TAIL MOTH (Nygmia phaeorrhoea Donovan.)

Maine. H. B. Peirson (August): Larvae and adults found in unusual numbers in Acadia National Park in July and August.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Montana. A. L. Strand (August): Cottonwood trees near Livingston were completely defoliated by forest tent caterpillar early this season. Damage elsewhere has not been reported.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Connecticut. E. P. Felt (August 24): The walnut caterpillar has been somewhat injurious to hickory foliage in the Danbury area.

Michigan. R. Hutson (August 24): Walnut datana has been numerous at Gobles, Vermontville, Paw Paw, DeWitt, and Lansing.

Mississippi. H. Gladney (August 24): Colonies of walnut caterpillars are scarce in Jackson and Harrison Counties.

FALL WEBWORM (Hyphantria cunea Drury)

Vermont. H. L. Bailey (August 19): Fall webworm is scarce in Vermont this year.

Connecticut. W. E. Britton (August 21): Nests are scarce throughout the State, much more so than in the average season.

E. P. Felt (August 24): Recently-hatched caterpillars (H. textor Harr.) were observed feeding on dogwood at Stamford.

Ohio. T. H. Parks (August 25): Webs are conspicuous in the State forests of southeastern Ohio.

Tennessee. G. M. Bentley (August 16): The first appearance of the fall webworm was on a sycamore tree in Knoxville.

Mississippi. C. Lyle (August 24): The fall webworm has caused very light damage this season.

BAGWORM (Thyridopteryx ephemeriformis Haw.)

Tennessee. G. M. Bentley (August 19): In comparison to other years the bagworm injury is fully 75 percent less throughout the State.

Alabama. J. M. Robinson (August 13): The bagworm was active on evergreens and deciduous trees at Alexander City, Auburn, Buffalo, Talladega, and Rogersville during July and August.

Mississippi. C. Lyle (August 24): Bagworms have become more noticeably destructive during the past month than earlier in the season.

Texas. F. L. Thomas (August 7): Bagworm was more abundant than usual throughout July on arborvitae and cedar at College Station. They have practically ceased feeding.

BEECH

BEECH SCALE (Cryptococcus fagi Baer.)

Maine. H. B. Peirson (July 31): Belted beech scale found in Township 36 M. D. in Washington County on beech. This is a new locality record.

A CERAMBYCID (Xylotrechus quadrimaculatus Hald.)

New York. R. D. Glasgow (August 18): Has become seriously destructive to beech trees, particularly to beech hedges in parts of Westchester County. (Identified by K. F. Chamberlain.)

EUROPEAN BIRCH LEAF MINER (Fenusa pumila Klug.)

Maine. H. B. Peirson (August 10): Heavy infestation on small gray birch was found in Acadia National Park on August 10.

Connecticut. R. B. Friend (August 22): Very abundant throughout the State on gray and white birches.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

New England and New York. J. V. Schaffner, Jr. (August 25): Infestations of elm leaf beetle in the Northeastern States generally are somewhat lighter than in 1935. However, there are many localities in southern New Hampshire, Massachusetts, Connecticut, and eastern New York that have elms badly browned by the feeding of larvae. In nearly every instance the infestations seem to be extremely local, the infested trees being adjacent to buildings where adults had hibernated.

New York. R. E. Horsey (August 15): Several infestations on American, Scotch, and other elms--on some trees quite severe-- in the towns of Penfield and Perinton near Rochester, as well as in the city were reported. Probably about the same as usual for the past few years. The majority of elms are little injured, although one variety of Scotch elm was found with every leaf skeletonized. Larvae from 3 to 5 mm in length were found on American elm on August 6. Probably second brood, as there was evidence of earlier feeding.

Ohio. T. H. Parks (August 25): This insect has defoliated some English and Chinese elms and has fed freely on American elms in isolated areas of our larger cities. The second brood of beetles is now out.

E. W. Mendenhall (August 11): Elm leaf beetle was found infesting English and Chinese elm trees on the west side of Columbus. Very bad on Chinese elm as well as other elms in Cincinnati and Springfield.

Tennessee. G. M. Bentley (August 19): Elm leaf beetle has broken out in two places. The first, in Centinell Park, Nashville, reported previously; the second on an American elm tree in Knoxville on August 3.

Kentucky. M. L. Didlake (August 24): Adults injuring new growth of leaves after earlier defoliation by first-brood larvae.

Washington. E. J. Newcomer (August 20): This beetle is thoroughly distributed in the Yakima Valley.

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus Marsham)

Connecticut. E. P. Felt (August 24): The European elm bark beetle was observed in numbers entering sickly elms at Greenwich.

AN ELM APHID (Tuberculatus ulnifolii Monell)

New York and New England. E. P. Felt (August 24): The elm aphid has been unusually abundant and prevalent in New York and southern New England.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

New York. R. E. Horsey (August 15): European elm scale is quite a common pest and now noticeable on American, Scotch, and Wredo elms.

Ohio. E. W. Mendenhall (August 13): The European elm scale is quite serious in a block of elms in a nursery near Springfield, Clark County.

FIR

BALSAM FIR SAWYER (Monochamus marmorator Kby.)

Vermont. H. L. Bailey (August 19): Many fir balsam trees in Orleans County show dead twigs due to chewing of bark by the adult balsam sawyer.

LINDEN

LINDEN WART GALL (Cecidomyia verrucicola O. S.)

Massachusetts. E. P. Felt (August 24): The linden wart gall occurred very commonly on the lower leaves of lindens in the vicinity of Boston.

LINDEN BORER (Saperda vestita Say)

New York. E. P. Felt (August 24): The linden borer is reported as injurious to young linden trees at Great Neck, Long Island.

LOCUST

A BUPRESTID (Agrilus difficilis Gory)

Nebraska. M. H. Swenk (August 24): On July 24 some honeylocust trees in York County were reported infested with borers.

MOUNTAIN ASH

MOUNTAIN ASH SAWFLIES (Pristiphora spp.)

Vermont and Maine. J. V. Schaffner, Jr. (August 25): This European sawfly, P. geniculata Htg., on mountain ash seems to be present through the Northeastern States wherever its food plant is at all common. In the Green Mountain National Forest, the Middlebury College Forest, and the Battell Park, in Vermont, most of the mountain ash observed on August 4 and 5 had been defoliated, whether in groups or as individual trees scattered through the stands of spruce and mixed hardwoods. Defoliation by this insect also common in Acadia National Park, Mount Desert Island, Maine.

Maine. H. B. Peirson (August): Mountain ash sawfly (Pristiphora banksi Marl.) has been general over Maine. Many partly to completely defoliated trees.

OAK

TWIG PRUNER (Hypernallus villosus F.)

New England. E. P. Felt (August 24): The oak twig pruner is moderately

abundant in southern New England.

Michigan. R. Hutson (August 24): The oak twig pruner is reported from Davisburg, South Lyons, Grand Haven, Niles, Lansing, Shelby, Detroit, and Pentwater.

A LEAF MINER (Lithocolletis hamadryalla Clem.)

New York. E. P. Felt (August 24): The white blotch oak leaf miner has been quite abundant on oaks on the north shore of Long Island, producing a considerable disfiguration of the foliage.

OAK SPANGLE GALL (Cecidomyia poculum O. S.)

Connecticut. E. P. Felt (August 24): A dainty, attractive oak spangle gall has been extremely abundant on some white oaks in the Stamford area.

PINE

A PINE WEEVIL (Pissodes approximatus Hopk.)

Connecticut. G. H. Plumb (May 5): Grubs about 15 mm in length burrowing in the base of the trunk between the ground level and the root system on Scotch pine. The trees were completely girdled; the outer surface of the trunk merely a mass of pitch, hardened on the outside. The ground at the base of the trees covered with bits of broken bark and hardened pitch. Several of the trees were already dead and others were dying. A section of one of the trees was caged on May 5 and adults emerged on July 14.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Michigan. R. Hutson (August 24): The white pine weevil is numerous at Presque Isle, Fife Lake, East Tawas, Lansing, and Fennville, on all of its hosts.

A CHRYSOMELID (Glyptoscelis pubescens F.)

New York. W. E. Blauvelt (May 26): Was found on pine in a nursery at East Patchogue, Long Island.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Const.)

New York. E. P. Felt (August 24): The Nantucket pine moth was reported as injurious to white pine shoots on Long Island.

PINE NEEDLE SCALE (Chionaspis pinifoliae Charb.)

Ohio. E. W. Mendenhall (August 9): The pine needle scale is quite bad on several of the pine varieties in a nursery at Carroll, Fairfield County.

POPLAR

POPLAR AND WILLOW BORER (Cryptorhynchus lapathi L.)

Michigan. R. Hutson (August 24): Poplar borer is numerous about Sault Sainte Marie.

Idaho. J. C. Evenden (August 5): C. lapathi, which was first recorded in this locality some 5 years ago, has spread over most of the territory surrounding Coeur d'Alene and has perhaps a much wider distribution.

POPLAR SAWFLY (Trichiocampus viminalis Fall.)

Connecticut. J. C. Schread (August 20): The Carolina poplars in the city of Bridgeport are, with a few exceptions, infested with the above-mentioned sawfly and in many instances the trees have been practically stripped of their foliage. This is the first year this pest has been abundant enough to attract attention.

SPRUCE

A GEOMETRID (Macaria granitata Guen.)

Maine. H. B. Peirson (August): Moths were found commonly over the State on spruce between June 1 and July 18.

SPRUCE BUDWORM (Cacoecia furiferana Clem.)

Minnesota. A. G. Ruggles (August): Spruce budworm damaging jack pine in northeastern Minnesota in St. Louis, Hubbard, and Crow Wing Counties.

TULIPTREE

AN APHID (Macrosiphum liriodendri Monell)

New England and New York. E. P. Felt (August 24): The tuliptree aphid has been unusually abundant and prevalent in southern New England and in New York.

WILLOW

EUROPEAN WILLOW LEAF BEETLE (Flagiodera versicolora Laich.)

New England. J. V. Schaffner, Jr. (August 25): The feeding by the imported willow leaf beetle is very noticeable in many New England localities. Recently infestations were noticed on willow east as far as Bar Harbor in Maine and northwest as far as Keene, N. Y.

Maine. H. B. Peirson (August 4): Very light presence of imported willow leaf beetle found at Bath.

INSECTS AFFECTING GREENHOUSE
AND ORNAMENTAL PLANTS

A PARASITIC WASP (Scolia dubia Say)

District of Columbia. E. A. Back (August 26): This wasp was found to be very numerous, resting on evergreens and flying over a lawn in the northwestern part of the city on August 24. It has been abundant about 10 days. The wasp was not found flying over neighboring premises.

SPINDLE WORM (Achatodes zeae Harr.)

Michigan. R. Hutson (August 24): Spindle worms are fairly common in columbine and dahlia at East Lansing.

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Maine. H. B. Peirson (July 23): On this date the cyclamen mite was heavy on larkspur, or delphinium, at Winthrop, causing blackening of flower-bud parts and distortion of foliage.

ALDER

ALDER FLEA BEETLE (Altica bimarginata Say)

Maine. H. B. Peirson (August): Alder flea beetle caused severe browsing in many growths of alder in eastern and central Maine during July and August.

J. V. Schaffner, Jr. (August 25): Throughout eastern Maine the foliage of speckled alder is badly skeletonized.

Vermont. H. L. Bailey (August 19): Alder flea beetle has been very abundant in sections of Essex County, including Ferdinand and Warner's Grant. Leaves completely skeletonized and many fallen to the ground on August 14.

New York. J. V. Schaffner, Jr. (August 25): Through the region of the Adirondacks in New York the foliage of speckled alder is badly skeletonized.

Idaho. J. C. Evenden (July 29): There is a rather severe outbreak at Ashton, Targhee National Forest, which will no doubt result in the defoliation of a large percentage of the willow shrubs in that locality. First record in this district.

ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

New York. R. D. Glasgow (August 18): One nursery in the lower Hudson Valley is reported to have removed and destroyed several score of large arborvitae trees that had been rendered worthless by the arborvitae leaf miner.

DOGWOOD

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

Connecticut. E. P. Felt (August 24): The red-humped apple caterpillars are somewhat injurious to flowering dogwood foliage at Stanford.

CECROPIA MOTH (Platysania cecropia L.)

Connecticut. E. P. Felt (August 24): The cecropia caterpillar was observed feeding on the foliage of flowering dogwood at Stanford.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Const.)

Alabama. J. M. Robinson (August 13): The euonymus scale is very abundant on euonymus, killing many of the twigs.

Mississippi. C. Lyle (August 24): Specimens of euonymus scale together with complaints, were received from Canton, Columbia, Terry, and Indianola, late in July and in August.

GLADIOLI

GLADIOLUS THRIPS (Taeniothrips simplex Morison)

Ohio. E. W. Mendenhall (August 8): Gladiolus thrips are slightly abundant on gladioli at Bowling Green, Wood County.

HAWTHORN

A LACEBUG (Corythucha cydoniae Fitch)

Michigan. R. Hutson (August 24): The quince lacebug is numerous on hawthorn about Springport.

Mississippi. C. Lyle (August 24): The lace bug was causing injury to hawthorn at Kosciusko on July 23.

JAPANESE LANTERN

THREE-LINED POTATO BEETLE (Lema trilineata Oliv.)

Vermont. H. L. Bailey (August 19): Old-fashioned potato beetles were very abundant at Montpelier, particularly on Japanese lantern plant, on August 10.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. R. E. Horsey (August 15): A badly infested large Kobus magnolia and a Star magnolia with considerable magnolia scale were found on this date at Rochester. Less scale than last year.

MARCISSUS

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Mississippi. C. Lyle (August 24): Bulb mite was present on bulbs received from New Albany on August 11.

PRIVET

LILAC LEAF MINER (Gracilaria syringella F.)

New York. E. P. Felt (August 24): The lilac leaf miner was found mining rather commonly the privet foliage at Southampton, Long Island.

ROSE

A ROSE TWIG GIRDLER (Agrilus communis rubicola Perrin)

Connecticut. M. F. Zappe (August 21): This summer the insect is rather scarce and has only been reported a few times by the nursery inspectors. In other years it was reported from nearly every nursery that had susceptible roses.

SUNFLOWER

SUNFLOWER BEETLE (Zygogramma exclamationis F.)

New Jersey. C. E. Mickel (August 11): H. H. Shepherd just returned from a trip through the East and turned over to me two specimens which he collected on sunflower at Vineland, N. J., on July 24. He reports that the larvae were working in sunflower buds. This is a western species known from Kansas, Arizona, and Montana.

WATERLILY

WATERLILY LEAF BEETLE (Galericella nymphacae L.)

Connecticut. E. A. Back (August 26): On August 16 the pond lily chrysomelid was found abundant in the egg, larval, pupal, and adult stages at North Windham. The species was defacing the foliage of the white pond lily.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicinae)

Maryland. F. C. Bishopp (August): Anopheles punctipennis Say has been quite annoying to residents of Silver Spring and vicinity during the past few weeks.

Oregon. C. M. Gjullin (July 31): A mosquito survey of the locality in and around Prineville showed A. maculipennis Meig. to be present in large numbers. It was practically the only species causing annoyance to the residents of the locality during the evenings. Larvae of this species were numerous in irrigation ditches and along the margins of sluggish streams.

SAND FLIES (Culicoides spp.)

Georgia. J. B. Hull (August 26): During July sand flies have caused very little annoyance in the vicinity of Savannah. Some C. dovei Hall were collected from recovery cages but only five specimens of C. canithorax Hoffm. were taken.

Florida. J. B. Hull (August 26): All reports from the east coast of Florida during July state that sand flies were worse than ever before. More correspondence in regard to sand-fly annoyance and requests for aid were received during July than at any time previously.

HUMAN FLEA (Pulex irritans L.)

Maryland. F. C. Bishopp (August 1): An unusually severe outbreak occurring on a farm near Bethesda was found to be caused by the human flea, breeding in large numbers in hog pens. The farmer's house later became heavily infested as a result of workmen bringing in the insects on their clothing. This is not common in the eastern part of the United States.

HOUSE CRICKET (Gryllus domesticus L.)

Virginia. E. A. Back (August 26): From May to August 22 the house cricket was abundant in and about a feed mill at Sunset Hills, where the crickets were making a nuisance of themselves by crawling into the machinery at night, only to be jarred into the feed stream when the mill was started, thus being conveyed to the food containers. Crickets are reported as having been abundant in the same mill during 1935. A huge pile of corn-cobs, in the rear of the plant, accumulated during the past several years, and a damp, uncleaned cellar are thought to furnish conditions favorable to increase.

Mississippi. C. Lyle (August 24): Crickets were entering houses in Forest and seriously damaging clothing according to a complaint received on July 30. They were also noticed in houses at State College during August.

FIELD CRICKET (Gryllus assinilis F.)

North Dakota. F. Gray Butcher (August 18): Black field crickets have been much more abundant in recent weeks, but there has been little injury from them.

Nebraska. M. H. Swenk (August 24): A complaint of annoyance by crickets in the basement of a Buffalo County home was received on July 22.

Kansas. H. R. Bryson (August 23): The common black field crickets are more numerous this fall than usual. They are causing considerable annoyance in basements and houses. A heavy population was observed along a half-mile stretch in Mitchell County on August 6.

BLOODSUCKING CONENOSE (Triatona sanguisuga Lec.)

Mississippi. C. Lyle (August): A specimen was collected in a home at New Albany on August 11. One killed was found full of blood and an occupant of the room had an inflamed place on the arm, probably due to the bite of this insect.

ANTS (Formicidae)

Mississippi. C. Lyle (August 24): Numerous complaints of ants have been received throughout the month. Solenopsis xyloni McCook was causing serious trouble. The Argentine ant (Iridomyrmex humilis Mayr) has been the source of numerous complaints also, while a few correspondents have sent in the tiny black ant (Monomorium minimum Buckl.).

Nebraska. M. H. Swenk (August 24): From Hall County on August 11 came the complaint that the carpenter ant (Camponotus herculeanus pennsylvanicus Deg.) was abundant on elm trees in that locality.

AMERICAN DOG TICK (Dermacentor variabilis Say)

Maryland, Virginia, and District of Columbia. F. C. Bishopp (August 15): Ticks decreased rapidly after the first week of August and infestations on dogs had practically stopped after the 15th in Maryland, Virginia, and the District of Columbia.

Mississippi. C. Lyle (August 24): The American dog tick was collected on cows by a correspondent at Purvis on July 31, who reported that ticks are numerous on dogs, hogs, and cows in the southern part of Forrest County.

BROWN DOG TICK (Rhipicephalus sanguinius Latr.)

Maryland. F. C. Bishop (August 20): Several heavy infestations of dogs and houses have been reported from Baltimore by some of the large insect-extermimating companies in that city.

CATTLE

SCREWORM (Cochliomyia americana C. & P.)

United States. W. E. Dove (August 24): In Florida and in some of the bordering counties of Georgia there was a low incidence, but the infestations were well distributed. The rainfall and temperatures in these wooded areas were favorable for infestations, but the small number of untreated injuries present did not permit the insects to increase. Cases were reported principally from navels of young animals and from tick bites, rather than from surgical operations and such preventable injuries. From August 1 to 21 there were 2,475 cases reported from Florida, 42 from Georgia, 16 from Alabama, 13 from Louisiana, 4 from Mississippi, and 9 from South Carolina. The reported cases included those caused by maggots of blowflies, as well as from screwworms. The primary screwworm occurred in most of the counties of Florida and in two localities in Georgia. Specimens obtained from Lowndes County on July 29 and from Effingham County on August 13 were identified as C. americana. In South Carolina, Alabama, Mississippi, and Louisiana C. americana larvae were not found among specimens collected from wounds. During the past 3 weeks there were 21,456 cases reported from Texas, 149 from Arizona, 21 from California, 7,659 from New Mexico, and 170 from Oklahoma. Following shearing there was an abrupt increase to 5,367 cases for 1 week. For the week ending August 21 there were 1,398 cases in this State. The cases reported from Texas include from 74 to 87 counties. In California true screwworms previously were reported only from the southern part of the State. In August they were encountered in Tulare County. This spread is attributed to the natural movement of animals to the lower lands and to the beet fields and stubbles of clover. At the stockyards in East St. Louis larvae of C. americana were obtained from injured animals in nine instances. The infestations were promptly treated before the animals were reshipped. Three infestations were found in calves from Fort Worth, Tex., which were consigned to the East. Two infestations were found in the stockyards at Kansas City, Mo., and were treated promptly. Local infestations in Kansas were encountered in Wabaunsee and Greenwood Counties. In both of these counties efforts were made to stamp out the introductions and there is no evidence of other cases. All animals shipped to the Southeastern States are being examined promptly upon arrival. It is felt that reintroductions of the pest will be prevented from causing serious trouble.

A BLOWFLY (Paralucilia fulvipes Macq.)

Arizona. C. C. Deonier (August 26): A number of specimens have been taken in fly trays in several localities in Arizona. Its occurrence in Arizona appears to be a new locality record for this species, as heretofore it has been considered as being restricted in the United States

to California. Present information on its distribution in Arizona indicates that it is more abundant in the higher altitudes. Although the species is primarily a carcass breeder, there is some evidence that it is involved in causing myiasis in animals.

HORN FLY (Haematobia irritans L.)

South Carolina. W. E. Dove (August 21): A heavy infestation of horn flies is present in certain localities on Johns Island, some animals having approximately 3,000 flies feeding on their backs.

GULF COAST TICK (Amblyomma maculatum Koch)

Mississippi. C. Lyle (August 24): The Gulf coast tick was collected on cows by a correspondent at Purvis on July 31, with the report that ticks are numerous on dogs, hogs, and cows in the southern part of Forrest County.

M. Brunson (August 26): Heavy infestations of all classes of livestock were reported from the northwestern part of Hancock County.

HOUSEHOLD AND STORED-PRODUCTS

INSECTS

Termites (Reticulitermes spp.)

Michigan. R. Hutson (August 24): Termites, R. flavipes Kol., have been reported as infesting houses in Lansing, and an infestation of potatoes in the field was discovered at Plainwell.

Minnesota. A. G. Ruggles (August 22): R. tibialis Banks found doing damage to timbers and floors of many houses in the southwestern part of the town of Luverne, in Rock County.

CIGARETTE BEETLE (Lasioderma serricorne L.)

District of Columbia. E. A. Back (August 26): During the first 2 weeks of August this species was infesting the straw upholstery of furniture.